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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,414	03/25/2004	Norihisa Miyoshi	2004_0469A	5261

513 7590 07/25/2005

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EXAMINER

RINEHART, KENNETH

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/808,414	<b>Applicant(s)</b> MIYOSHI ET AL	
	<b>Examiner</b> Kenneth B. Rinehart	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 37-70 is/are pending in the application.
- 4a) Of the above claim(s) 43-51 and 60-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-40, 42, 52-57, 59, 69 and 70 is/are rejected.
- 7) ☒ Claim(s) 41 and 58 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/9/05, 3/25/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

This application contains claims directed to the following patentably distinct species of the claimed invention: figures 2-10, 12, and 13.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 37 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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During a telephone conversation with Mr. Gorski on 7/18/05 a provisional election was made with traverse to prosecute the invention of Figure 2, claims 37-42, 52-59, and 69 and 70. Affirmation of this election must be made by applicant in replying to this Office action. Claims 43-51, 60-68 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, having the second separated mixture be delivered non-vertically upwardly in said incombustible discharge by a fluidized medium delivering device, said fluidized-bed separating chamber comprises a passage portion connected to said incombustible discharge passage, with said passage portion having a cross-sectional area gradually increasing toward said incombustible discharge passage, and also having a bottom surface inclined downwardly to said incombustible discharge passage must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. **Note: These features are not shown in figure 2 which was elected.**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 37-40, 42, 54-57, 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Klaschka (4,535,706). Klaschka shows a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of the fluidized-bed furnace (23, fig. ); a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (41, fig. ), and to separate the mixture into a first separated mixture having a high concentration of the fluidized medium (above 42, fig.) and a second

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separated mixture having a high concentration of the incombustible (43, fig.); a conveyor in said mixture delivery path to deliver the mixture from the bottom of the fluidized-bed furnace to said fluidized-bed separating chamber (col. 3, line 50-53); a return passage to return the first separated mixture to the fluidized-bed furnace (fig. ); and an incombustible discharge passage to discharge the second separated mixture to an exterior of the fluidized-bed furnace (40, fig.), wherein said incombustible discharge passage is disposed downstream of said fluidized-bed separating chamber (40, fig.), said incombustible discharge passage is to discharge the second separated mixture to an exterior of the fluidized-bed furnace by having the second separated mixture be delivered upwardly in said incombustible discharge passage and then discharged from said incombustible discharge passage, at a position higher than a surface of the fluidized bed when formed in the fluidized-bed furnace, to the exterior of the fluidized-bed furnace (fig.), said incombustible discharge passage is to discharge the second separated mixture to the exterior of the fluidized-bed furnace by having the second separated mixture be delivered vertically upwardly in said incombustible discharge passage by a fluidized medium delivering device (40, fig.), and then discharged from said incombustible discharge passage, at the position higher than the surface of the fluidized bed when formed in the fluidized-bed furnace, to the exterior of the fluidized-bed furnace (fig. ), a fluidized medium delivering device within said incombustible discharge passage, such that said incombustible discharge passage is to discharge the second separated mixture to the exterior of the fluidized-bed furnace by having the second separated mixture be delivered upwardly in said incombustible discharge by said fluidized medium delivering device, and then discharged from said incombustible discharge passage, at the position higher than the surface of the fluidized bed when formed in the fluidized-bed furnace, to the

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exterior of the fluidized-bed furnace (40, fig. ), a fluidized-bed furnace to have a fluidized bed formed therein by a fluidized medium so as to combust, gasify, or pyrolyze material containing an incombustible, and an incombustible withdrawing system including (17, fig.)(i) a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of said fluidized-bed furnace (23, fig.), (ii) a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (41, fig.), and to separate the mixture into a first separated mixture having a high concentration of the fluidized medium (above 43, fig.) and a second separated mixture having a high concentration of the incombustible (43, fig.), (iii) a conveyor in said mixture delivery path to deliver the mixture from the bottom of said fluidized-bed furnace to said fluidized-bed separating chamber (23, fig.), (iv) a return passage to return the first separated mixture to said fluidized-bed furnace (above 43, fig.), and (v) an incombustible discharge passage to discharge the second separated mixture to an exterior of said fluidized-bed furnace (43, fig.), said incombustible discharge passage is disposed downstream of said fluidized-bed separating chamber (43, fig.),

Claims 37, 38, 52, 54, 55, 69, are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (JP06257953). Nishikawa shows a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of the fluidized-bed furnace (above 18, fig. 2); a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (7, fig. 2), and to separate the mixture into a first separated mixture having a high concentration of the fluidized medium (6, fig. 2) and a second separated mixture having a high concentration of the incombustible (4, fig. 2); a conveyor in said mixture delivery path to deliver the mixture from the bottom of the fluidized-bed furnace to said

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fluidized-bed separating chamber (above 18, fig. 2); a return passage to return the first separated mixture to the fluidized-bed furnace (06, fig. 2); and an incombustible discharge passage to discharge the second separated mixture to an exterior of the fluidized-bed furnace (fig. 2), wherein said incombustible discharge passage is disposed downstream of said fluidized-bed separating chamber (04, fig. 2), said fluidized-bed separating chamber comprises a passage portion connected to said incombustible discharge passage, with said passage portion having a cross-sectional area gradually increasing toward said incombustible discharge passage, and also having a bottom surface inclined downwardly to said incombustible discharge passage (fig. 1), a fluidized-bed furnace to have a fluidized bed formed therein by a fluidized medium so as to combust, gasify, or pyrolyze material containing an incombustible, and an incombustible withdrawing system including (1, fig.) (i) a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of said fluidized-bed furnace (above 7, fig. 1), (ii) a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (7, fig. 1), and to separate the mixture into a first separated mixture having a high concentration of the fluidized medium (4, fig. 3) and a second separated mixture having a high concentration of the incombustible (06, fig. 1), (iii) a conveyor in said mixture delivery path to deliver the mixture from the bottom of said fluidized-bed furnace to said fluidized-bed separating chamber (above 7, fig.), (iv) a return passage to return the first separated mixture to said fluidized-bed furnace (6, fig. 1), and (v) an incombustible discharge passage to discharge the second separated mixture to an exterior of said fluidized-bed furnace (below 4, fig. 1), said incombustible discharge passage is disposed downstream of said fluidized bed separating chamber (4, fig. 1)



Claims 53 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (JP06257953). Nishikawa discloses a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of the fluidized-bed furnace (above 18, fig. 2); a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (7, fig. 2), and to separate the mixture into a first separated mixture having a high concentration of the fluidized medium (6, fig. 2) and a second separated mixture having a high concentration of the incombustible (4, fig. 2); a conveyor in said mixture delivery path to deliver the mixture from the bottom of the fluidized-bed furnace to said fluidized-bed separating chamber (above 18, fig. 2); a return passage to return the first separated mixture to the fluidized-bed furnace (06, fig. 2); and an incombustible discharge passage to discharge the second separated mixture to an exterior of the fluidized-bed furnace (fig. 2), said return passage and said incombustible discharge passage are connected to said fluidized-bed separating chamber independently of each other (fig. 1), and said incombustible discharge passage is to discharge the second separated mixture to the exterior of the fluidized-bed furnace via an incombustible discharge port at a position ... than a surface of the fluidized bed when formed in the fluidized-bed furnace (fig. 1), a fluidized-bed furnace to have a fluidized bed formed therein by a fluidized medium so as to combust, gasify, or pyrolyze material containing an incombustible, and an incombustible withdrawing system including (1, fig.) (i) a mixture delivery path to deliver a mixture of the fluidized medium and the incombustible from a bottom of said fluidized-bed furnace (above 7, fig. 1), (ii) a fluidized-bed separating chamber disposed downstream of said mixture delivery path to fluidize the mixture by a fluidizing gas (7, fig. 1), and to separate the mixture into a first separated mixture having a high concentration of the

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fluidized medium (4, fig.3) and a second separated mixture having a high concentration of the incombustible (06, fig. 1), (iii) a conveyor in said mixture delivery path to deliver the mixture from the bottom of said fluidized-bed furnace to said fluidized-bed separating chamber (above 7, fig.), (iv) a return passage to return the first separated mixture to said fluidized-bed furnace (6, fig. 1), and (v) an incombustible discharge passage to discharge the second separated mixture to an exterior of said fluidized-bed furnace (below 4, fig. 1). Nishikawa discloses applicant's invention substantially as claimed with the exception of higher. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have higher because applicant has not disclosed that higher provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the location of Nishikawa or the claimed location because both perform the same function equally well.

#### *Allowable Subject Matter*

Claims 41 and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Rinehart whose telephone number is 571-272-4881. The examiner can normally be reached on 7:20 -4:20.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kbr

  
KENNETH RINEHART  
PRIMARY EXAMINER